



Latvian Presidency  
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MINISTRY OF AGRICULTURE  
REPUBLIC OF LATVIA



MINISTRY OF FOREIGN AFFAIRS  
REPUBLIC OF LATVIA



# EASTERN PARTNERSHIP

## Rural and Agricultural Advisory Systems: Best Practices and Experience in the Eastern Partnership



Riga, 15 – 16 April 2015



Ltd "Latvian Rural Advisory and Training Centre"



Latvian Rural Network



# Rural and Agricultural Advisory Systems (RAAS): Best Practices and Experience in the Eastern Partnership

## The role of higher education and science in the development of agriculture and rural development

15.04.2015

Latvian University of Agriculture (LUA)  
Rector, Professor , Dr. oec. Irina Pilvere



# LUA Importance

We are preparing specialists and doing research for the Bioeconomy sectors (Agriculture, forestry, food products and wood products)

## Bioeconomy in Latvia in 2013:

- accounted for 39% of total export values
- contributes 55% of the value added of all the goods produced in Latvia

## Bioeconomy potential in Latvia in 2020:

- increasing by about 43% of the value of production (extraction of biomass) in crop and livestock production, in forestry by 25%, providing food and forestry with sustainable development in the meantime
- may increase total export potential by about EUR 2 billion per year, or about 51%.



# LUA Mission:

Latvijas Lauksaimniecības  
universitāte

*Vēsture. Izglītība. Zinātne. Kultūra*



to develop the intellectual potential for sustainable future of Latvia and, especially, rural areas

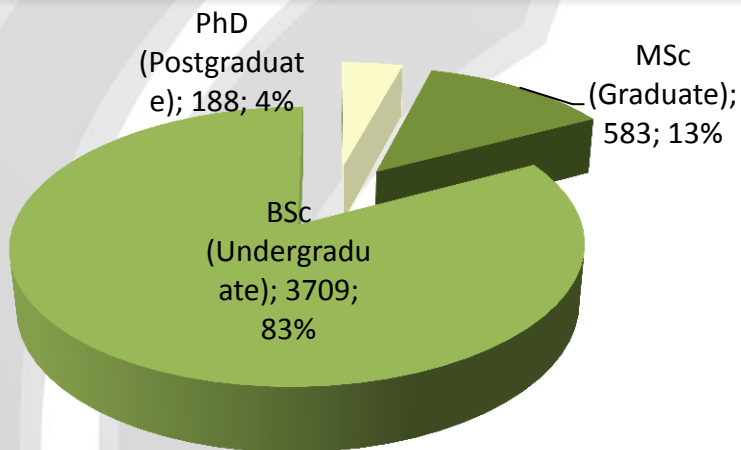
**EDUCATION,  
t.sk.  
lifelong  
education**

**SCIENCE**

**COOPERATION**



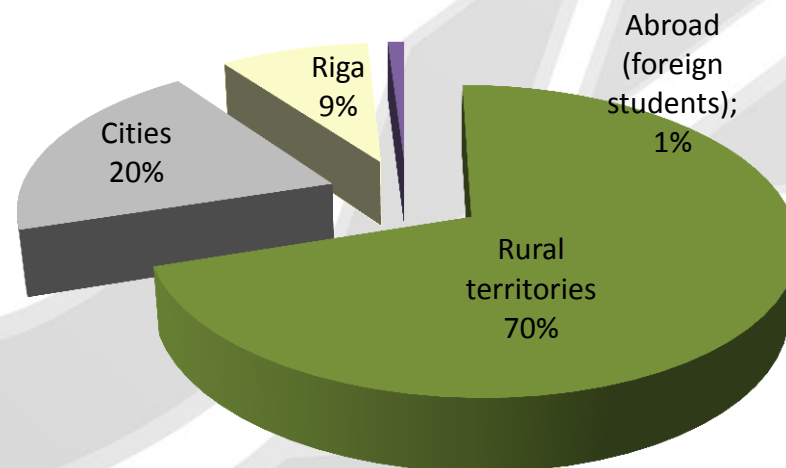
# Education



**Number of students (Total - 4480)\***

## Study Programmes

Undergraduate	27
Graduate	23
Higher professional (2 <sup>nd</sup> level)	1
Postgraduate	13
<b>Total</b>	<b>64</b>



**Distribution of students by place of residence (without PhD)\***



## Faculty of Agriculture

### Study areas

- Horticulture
- Crop Cultivation
- Animal Husbandry
- Entrepreneurship in Agriculture

### Research fields

- Research of soil, improvement of crop productivity and yield quality
- Plant health, environmentally friendly technologies
- Development of animal productivity and functional efficacy

## Forest Faculty

### Study areas

- Forestry
- Forest Exploitation
- Wood Processing

### Research fields

- Forest cultivation, conservation, production mining technology
- Wood processing

## Faculty of Food Technology

### Study areas

- Food technology
- Food science
- Hotel and restaurant management

### Research fields

- New products, their production technologies and nutrition
- The studies of nutrients
- Food safety and risk management

## Faculty of Veterinary Medicine

### Study areas

- Veterinary medicine
- Food hygiene

### Research fields

- In the area of veterinary medicine, medicine and biology



# Studies and Research

## Faculty of Engineering

### Study areas

- Automobile transport
- Agricultural machinery
- Agricultural energetics
- Pedagogy

### Research fields

- Alternative energy resources
- Energy saving technologies
- Use of biomass for energy production
- Machine design and manufacturing
- Performance of electric vehicles

## Faculty of Information Technologies

### Study areas

- Computer control and computer science
- Information technologies
- Programming

### Research fields

- Risk analysis in agriculture
- Agriculture information systems
- Modelling of biological process imitations
- Regional analysis

## Faculty of Rural Engineering

### Study areas

- Environmental engineering and water management
- Landscape architecture and planning
- Land management and surveying
- Civil engineering

### Research fields

- Agriculture impact on the environment
- Self-runoff drainage systems
- Development of rural landscape
- Development of new energy efficient building materials

## Faculty of Economics and Social Development

### Study areas and research fields

- Economics, Business management
- Public administration, External relations of organizations
- Project management, Finance and credit



# Lifelong Education

## Opportunities:

- Students can acquire additional qualification
- Any person can acquire necessary abilities and skills
- Equate the courses mastered to formal education
- 34 various courses
- Approximately 1,500 attendees per year

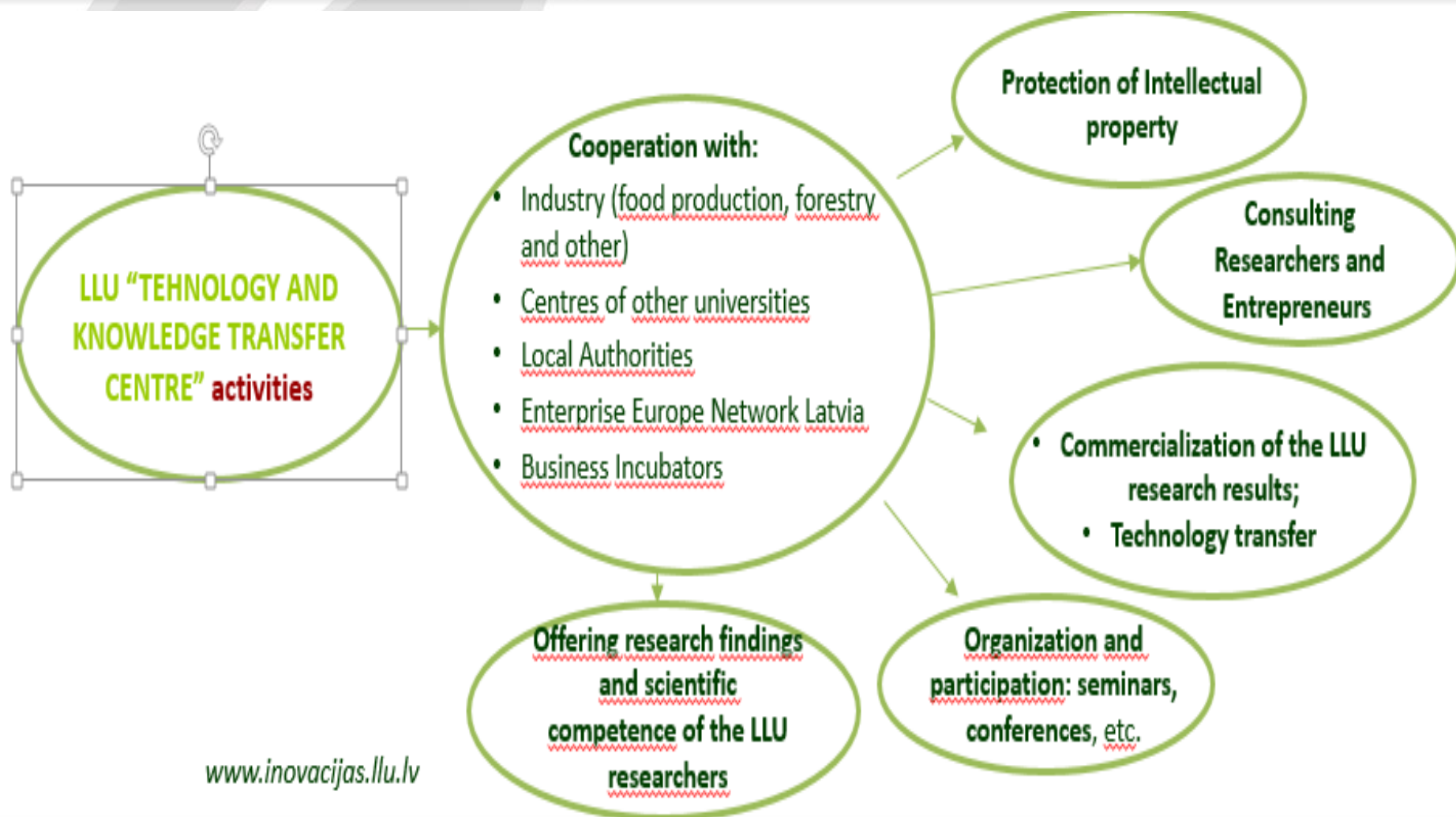




# Technology and Knowledge Transfer

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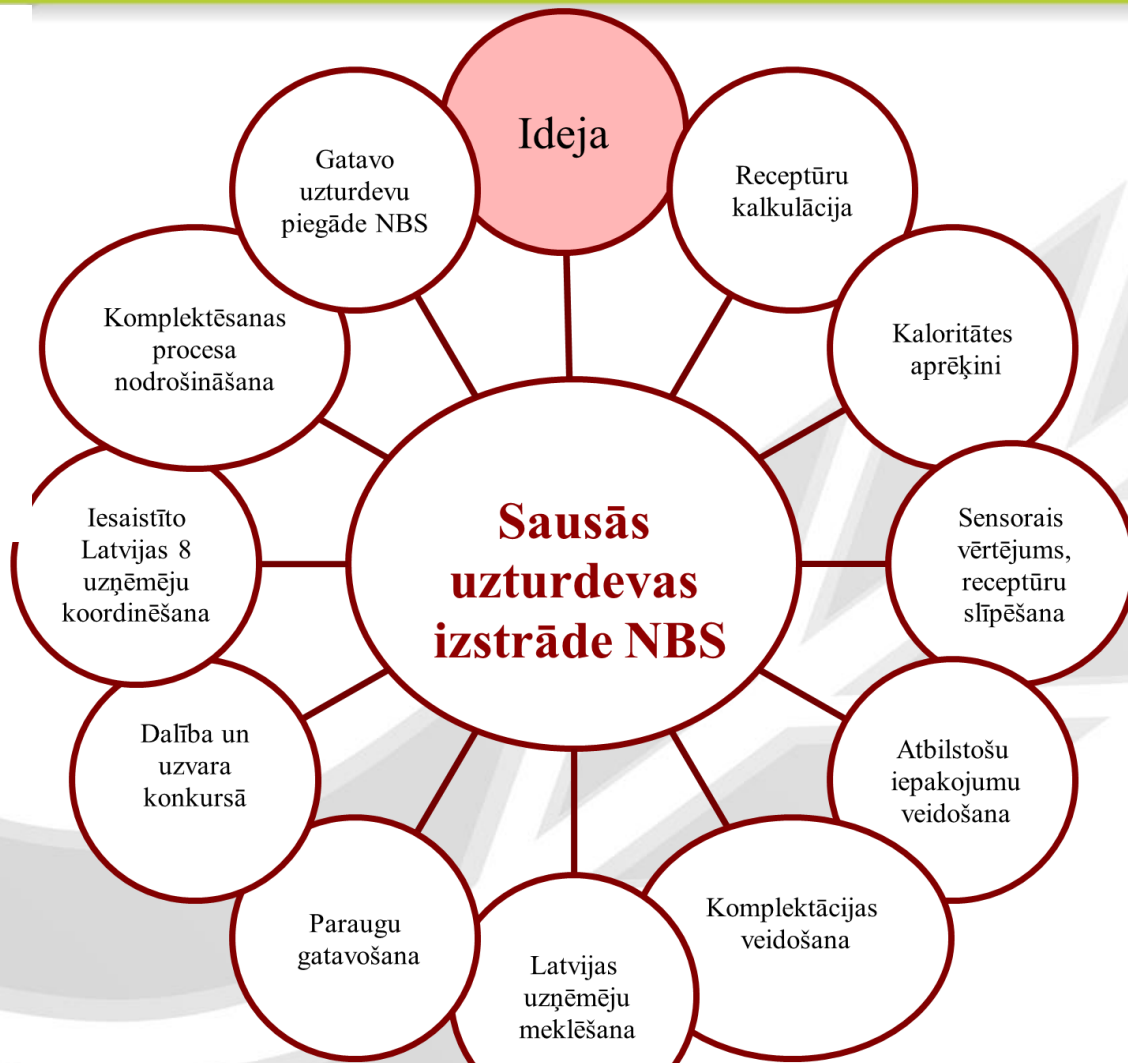




# Some Examples of Cooperation

## Development of Food Products

- Latvian National Armed Forces use it since 2011
- In 2013, LUA scientists received an award for development of dry ration from the Naf Commander
- Cooperation with producers continues



## Development of Food Products

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- Biograph organic sweets, Ltd. – fruit cubes
- Lat Eko Food, Ltd. – baby food
- Felici, Ltd. – breakfast cereals “Musli Graci” with high nutritional value
- Paplāte Nr. 1, Ltd – Ready to use potato products
- MILZU! – breakfast cereals with high nutritional value

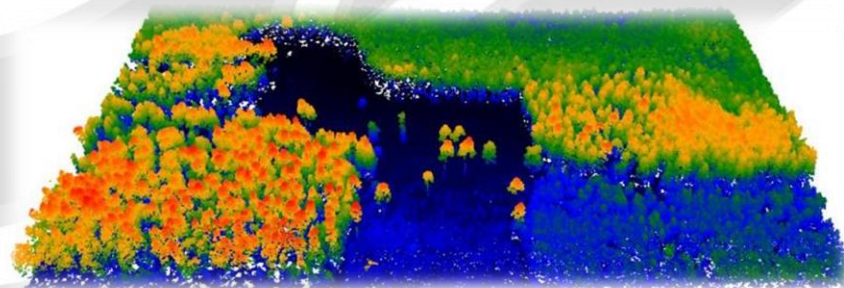




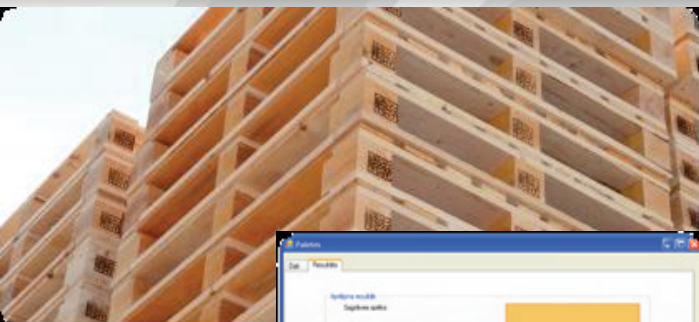
# Forest Exploration

**Research at all stages of the delivery chain starting from growing of raw materials up to end consumers:**

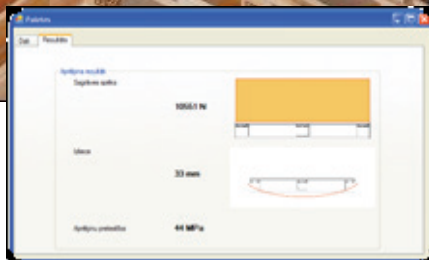
- Forest ecology
- Valuation of forests
- Forest growth and progress monitoring
- Work capacity assessment in forest work, etc.



# Wood Industry



**Forecasting resistance of wooden pallets**  
MARKO KEA, Ltd.



**Reaction of wooden joints to fire**  
MiTek Baltic, Ltd.



**Testing furniture and surface finishing**





# Technological Solutions



**Outdoor air heat pump for heating of piglet shed**  
Ulbroka Ltd.



**Testing of large-size building structures**  
TENAX, Ltd., JSC Inspecta Latvia, etc.



**Pollen drier**



# Landscaping and Land Development Projects

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Skats Tauriņu dārzā

LUA scientists develop **municipal** (Riga, Jelgava, Jekabpils, Ventspils, Bauska, Dobele, Rujiena, Limbazi, Daugavpils, Liepāja, Sigulda, etc.) **landscaping and land development projects.**

Three yards were facilitated in Jelgava jointly with Road construction company “Igate” Ltd. in 2014







# Latvian RIS3

*Transformation of national economy, by providing science and technology driven growth and movement towards knowledge based development of capabilities*

## Virzieni:

1. **Ražošanas un eksporta struktūras maiņa tradicionālajās tautsaimniecības nozarēs;**
2. Izaugsme nozarēs, kurās eksistē vai ir iespējams radīt produktus un pakalpojumus ar augstu pievienoto vērtību;
3. Nozares ar nozīmīgu horizontālo ietekmi un ieguldījumu tautsaimniecības transformācijā.

## Prioritātes:

1. “Augstas PV produkti”
2. “Produktīva inovāciju sistēma”
3. “Energoefektivitāte”
4. Moderna IKT
5. Moderna izglītība
6. Zināšanu bāze
7. Policentriska attīstība

## Specializācijas jomas:

1. **Zināšanu ietilpīga bioekonomika**
2. **Biomedicīna, medicīnas tehnoloģijas, biofarmācija un biotehnoloģijas**
3. **Viedie materiāli, tehnoloģijas un inženiersistēmas**
4. **Viedā enerģētika**
5. **Informācijas un komunikāciju tehnoloģijas**



# Bioeconomy

## Bioeconomy Strategic Research Alliance in Latvia

(Founded on Sep 24, 2014)

### Objectives:

- To enhance the competitiveness of Bioeconomy sectors through research and innovation
- To contribute the implementation of overall EU 2020 thematic objectives

### Research and innovation capacity:

- > 400 doctors of science in:
  - Latvia University of Agriculture (LUA)
  - Agriculture and food Research institutes (7), incl. 2 private
  - Forest sector Research institutes (3), incl. 1 created by the private sector & LUA



## Agriculture and food processing:

- Innovative, risk diminishing plant **growing and** animal **breeding technologies** by using available resources efficiently and sustainably;
- Development of innovative **high added value niche products** from traditional and untraditional agricultural plant and animal raw materials;
- Technological solutions of plant **growing and** animal **breeding, and use of by-products in processing** for generation of high added value products;
- **Food safety**



# Directions of Research

## Forestry:

- Growing sustainable and efficient forest under changing weather conditions
- Innovative, competitive (niche) products with high added value
- Complete utilization of woody biomass for chemical processing and energy production



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***Paldies!***  
***Thank You!***  
***Спасибо!***

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